

Amendment to the Claims:

1. (Currently Amended) A heat-storing medium for a low-temperature range, ~~composed of~~ comprising:

a set ~~[[(22)]]~~ of pourable bodies, ~~wherein~~ the bodies are being gastight sealed hollow bodies, ~~[[(30)]]~~ and each hollow body ~~[[(30)]]~~ contains ~~containing~~ a fill ~~[[(34)]]~~ of a low-boiling gas as a storage medium, ~~characterized in that~~ the and having hollow body wall ~~[[(32)]]~~ is made of metal.

2. (Currently Amended) The heat-storing medium according to claim 1, ~~characterized in that~~ wherein the hollow body wall ~~[[(32)]]~~ is made of copper.

3. (Currently Amended) The heat-storing medium according to claim 1 ~~[[or 2]]~~, ~~characterized in that~~ wherein the material and the wall thickness of the hollow body wall ~~[[(32)]]~~ are selected such that the thermal penetration depth equals at least ~~one~~ the wall thickness.

4. (Currently Amended) The heat-storing medium according to ~~one of claims~~ claim 1 ~~[[-3]]~~, ~~characterized in that~~ wherein the storing medium is a fill ~~[[(34)]]~~ of helium.

5. (Currently Amended) The heat-storing medium according to claim 4, ~~characterized in that~~ wherein the helium fill ~~[[(34)]]~~ has a pressure of more than 0.5 bar at a temperature of 4 K.

6. (Currently Amended) The heat-storing medium according to claim 4 ~~[[or 5]]~~, ~~characterized in that~~ wherein the helium fill ~~[[(34)]]~~ has a pressure of approximately 200 bar at room temperature.

7. (Currently Amended) The heat-storing medium according to ~~one of claims claim~~ claim 1~~[-6]]~~, ~~characterized in that wherein~~ the wall thickness of the hollow body wall ~~[(32)]~~ is smaller than 1.0 mm.

8. (Currently Amended) The heat-storing medium according to ~~one of claims claim~~ claim 1~~[-7]]~~, ~~characterized in that wherein~~ the hollow body ~~[(30)]~~ is of approximately spherical configuration.

9. (Currently Amended) The heat-storing medium according to claim 8, ~~characterized in that wherein~~ the hollow body ~~[(30)]~~ has a diameter of less than 3.0 mm.

10. (Currently Amended) The heat-storing medium for a low-temperature range, comprising:

a set ~~[(22)]~~ of pourable bodies, ~~wherein the bodies are gastight sealed~~ hollow bodies, ~~[(30)]~~ and each hollow body ~~[(30)]~~ ~~contains~~ containing a fill ~~[(34)]~~ of a low-boiling gas as a storing medium, ~~characterized in that the~~ and having a hollow body wall ~~[(32)]~~ is made of ceramic material.

11. (Currently Amended) A regenerator ~~[(14)]~~ for a low-temperature refrigerator ~~[(10)]~~, comprising:

a housing ~~[(24)]~~ filled with the heat-storing medium ~~[(22)]~~ according to ~~one of claims claim~~ claim 1~~[-10]]~~.

12. (Currently Amended) A low-temperature refrigerator ~~[(10)]~~ comprising:

a regenerator ~~[(14)]~~ according to claim 11, ~~characterized by its configuration~~ and being configured as a Gifford-McMahon, Stirling, or pulse tube refrigerator, ~~wherein and~~

helium gas is used as a working fluid.

13. (New) A regenerator for a low-temperature refrigerator, comprising:

a housing filled with the heat-storing medium according to claim 10.

14. (New) A regenerator for a low temperature refrigerator comprising:

a housing;

a plurality of hollow, gas sealed bodies disposed in the housing, each body including:

a body wall made of one of metal and ceramic material,
which defines an interior cavity,
a gas which boils at or below 30° K disposed in the
cavity.

15. (New) The regenerator according to claim 14 wherein the gas includes at least one of helium, hydrogen, and neon.

16. (New) The regenerator according to claim 14 wherein the body wall is thicker than:

$$\sqrt{2 \frac{a}{f_{\text{mod}}}}$$

where a is a thermal conductivity of the material at a working temperature below 15° K and f_{mod} is a modulation frequency at which a working gas alternately flows through the housing.

17. (New) The regenerator according to claim 14 wherein the material includes one of copper, aluminum, silver, brass, steel, and alloys thereof.

18. (New) The regenerator according to claim 14 wherein the bodies are less than 3 mm in diameter and a body wall thickness less than 0.2 mm.

19. (New) The regenerator according to claim 14 wherein the gas in the cavity has a pressure of at least 7.25 psi at 4° K.